

CLAIMS

What is claimed is:

1. A method of producing medicament particles comprising dissolving the medicament in a solvent, producing one or more streams of medicament solution and
5 contacting these streams with one or more streams of anti-solvent in order to produce a region of turbulent mixing in which rapid precipitation of medicament crystals takes place wherein the relative velocity of the streams is equal to or exceeds 30m/s, the velocity of each stream is controlled to substantially remove cyclic variations, and the ratio of the volume flow of anti-solvent to volume flow of medicament solution exceeds 2:1.
- 10 2. A method according to claim 1 in which the relative velocity of the streams exceeds 50m/s.
3. A method according to claim 1 in which the angle between the streams of solution and anti-solvent is less than 20°.
4. A method according to claim 1 in which the streams of solution and anti-solvent
15 are substantially directly opposed.
5. A method according to claim 1 in which the relative velocity of the streams is between 70 and 200m/s .
6. A method according to claim 1 in which the ratio of volume flow of anti-solvent to medicament solution is greater than 10:1.
- 20 7. A method according to claim 1 in which the ratio of volume flow of anti-solvent to medicament solution is between 15:1 and 30:1.
8. A method according to claim 1 in which the solvent is dimethylformamide.
9. A method according to claim 1 in which the anti-solvent is water.
- 25 10. A method according to claim 1 in which the medicament is triamcinolone acetonide.

11. A medicament powder produced by a method according to claim 1.
12. A medicament powder suitable for inhalation use produced by a method according to claim 1.
13. Triamcinolone acetonide produced by a method according to claim 1.
- 5 14. An apparatus for carrying out a method according to claim 1 comprising a cylinder with two or more orifices set into the cylinder walls through which streams of medicament solution and anti-solvent are produced which impinge on each other, wherein the streams of medicament solution and anti-solvent are produced by the actions of pumps and wherein the apparatus comprises means for reducing cyclic variations in stream velocities
- 10 15. An apparatus according to claim 14 in which the angle between the streams of solution and anti-solvent is less than 20° .
16. An apparatus according to claim 14 in which the streams of solution and anti-solvent are substantially directly opposed.
17. An apparatus according to claim 14 in which the cylinder has an internal diameter
- 15 between 0.2 and 1.0mm.
18. An apparatus according to claim 14 in which the orifice used to produce the medicament solution stream has a diameter between 50 and 200 micrometer and the orifice used to produce the anti-solvent stream has a diameter between 100 and 500 micrometer.